Sub C1

41. (Amended) A pulse oximeter comprising:

C1 at least first and second light emitting devices;

at least one light detector configured to receive light attenuated by transmission through a body tissue with pulsing blood, the at least one light detector acquiring a first signal based on the first light emitting device comprising a first desired signal portion and a first undesired signal portion and a second signal based on the second light emitting device comprising a second desired signal portion and a second undesired signal portion; and

B1

a closed loop adaptive system responsive to said first and second signals to provide at least first and second output signals for use in calculating oxygen saturation of said blood.

2 4~~2~~. (Amended) The pulse oximeter of Claim 4~~1~~ 1, wherein the adaptive system executes a least squares algorithm.

4 4~~3~~. (Amended) The pulse oximeter of Claim 4~~1~~ 1, wherein the adaptive system executes an adaptive algorithm.

3 4~~4~~. (Amended) The pulse oximeter of Claim 4~~2~~ 2, wherein the adaptive system executes a least squares lattice.

5 4~~5~~. (Amended) The pulse oximeter of Claim 4~~1~~ 1, further comprising a display coupled to the adaptive system.

6 ~~46~~. (Amended) A pulse oximeter comprising:

at least first and second light emitting devices;

at least one light detector configured to receive light attenuated by transmission through body tissue with pulsing blood, the at least one light detector generating a first signal based on light transmitted from the first light emitting device and a second signal based on light transmitted from the second light emitting device; and

a processor that effects signals representing the first and second signals to provide at least one output signal, wherein the processor adjusts itself to optimize the at least one output signal for use in calculating oxygen saturation.

7 4~~7~~. (Amended) The pulse oximeter of Claim 4~~6~~ 6, wherein the optimum corresponds to execution of a least squares algorithm to convergence by said processor.

B

8 ~~48~~. (Amended) The pulse oximeter of Claim 7 ~~47~~, wherein the least squares algorithm is a component of an adaptive noise canceler.

9 ~~49~~. (Amended) The pulse oximeter of Claim 7 ~~47~~, wherein the least squares algorithm comprises a least squares lattice.

10 ~~50~~. (Amended) The pulse oximeter of Claim 7 ~~47~~, wherein the least squares algorithm comprises a least mean squares algorithm.

11 ~~51~~. (Amended) The pulse oximeter of Claim 6 ~~46~~, further comprising a display coupled to the processor.

B1 cont.

12 ~~52~~. (Amended) A method of calculating blood oxygen saturation comprising:

transmitting light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate first and second intensity signals;

digitizing the first and second intensity signals; and

processing the first and the second digitized intensity signals to provide first and second processed output signals, wherein the processing comprises monitoring an output of the processing, and in response, adjusting the processing to optimize at least one of said first or second processed output signals; and

calculating oxygen saturation based upon said first and second processed output signals.

13 ~~53~~. (Amended) The method of Claim 12 ~~52~~, wherein the optimum corresponds to executing a least squares algorithm to convergence.

14 ~~54~~. (Amended) The method of Claim 12 ~~52~~, wherein the optimum corresponds to executing an error reducing algorithm to convergence.

15 ~~55~~. (Amended) The method of Claim 12 ~~52~~, wherein the optimum corresponds to executing a least squares lattice.

16 ~~56~~. (Amended) The method of Claim 15 ~~55~~, wherein the least squares lattice is a component of an adaptive noise canceler.

17 ~~57~~. (Amended) The method of Claim 12 ~~52~~, further comprising displaying the oxygen saturation.

B

18 ~~58~~. (Amended) A pulse oximeter comprising:

at least one light detector configured to receive light of at least first and second wavelengths attenuated by transmission through a body tissue with pulsing blood, the at least one light detector generating a first signal based on light of the first wavelength and a second signal based on light of the second wavelength;

an analog to digital converter that digitizes the first and the second signals to produce digitized first and second signals; and

B1 cont.

a processor that employs an adaptive algorithm to effect the digitized first and second signals for use in calculating oxygen saturation.

19 ~~59~~. (Amended) The pulse oximeter of Claim ~~58~~ 18, wherein the adaptive algorithm comprises a least squares algorithm.

20 ~~60~~. (Amended) The pulse oximeter of Claim ~~58~~ 18, wherein the adaptive algorithm comprises a least squares lattice.

21 ~~61~~. (Amended) The pulse oximeter of Claim ~~60~~ 20, wherein the adaptive algorithm is a component of an adaptive noise canceler.

22 ~~62~~. (Amended) The pulse oximeter of Claim ~~58~~ 18, further comprising a display.

23 ~~63~~. (Amended) A pulse oximeter comprising:

at least one light detector configured to receive light of at least first and second wavelengths attenuated by transmission through a body tissue with pulsing blood, the at least one light detector generating a first signal based on light of the first wavelength and a second signal based on light of the second wavelength;

an analog to digital converter that digitizes the first and the second signals to produce first and second digitized signals; and

a microprocessor that has a routine that executes a least squares algorithm to effect the first and the second digitized signals to produce first and second output signals, the first and second output signals for use in calculating oxygen saturation.

24 ~~64~~. (Amended) The pulse oximeter of Claim ~~63~~ 23, wherein the effect from the least squares algorithm is to optimize at least one of the first and second output signals.

25 ~~65~~. (Amended) The pulse oximeter of Claim ~~63~~ 23, wherein the least squares algorithm comprises a least squares lattice.

26 ~~66~~. (Amended) The pulse oximeter of Claim ~~66~~ ~~65~~ 25, wherein the least squares algorithm is a component of an adaptive noise canceler.

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Please add the following new claims.

27 ~~67~~. A method of determining blood oxygen saturation comprising:

transmitting light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate at least one intensity signal;

processing the at least one intensity signal using a closed loop adaptive algorithm to provide at least one output signal; and

calculating oxygen saturation based upon the at least one output signal.

B2

28 ~~68~~. The method of claim 27 ~~67~~, further comprising converting the at least one intensity signal to a digital representation of the at least one intensity signal, prior to the processing.

29 ~~69~~. The method of claim 27 ~~67~~, wherein the at least one intensity signal comprises at least a desired portion and a noise portion.

30 ~~70~~. The method of Claim 29 ~~69~~, wherein the noise portion is caused at least in part by motion of a patient.

31 ~~71~~. The method of Claim 29 ~~69~~, wherein the noise portion is uncorrelated to the desired portion.

32 ~~72~~. The method of Claim 31 ~~71~~, wherein the processing reduces the noise portion.

33 ~~73~~. The method of Claim 29 ~~69~~, wherein the noise portion is erratic.

34 ~~74~~. The method of Claim 29 ~~69~~, wherein the processing reduces the noise portion.

35 ~~75~~. The method of Claim 34 ~~74~~, wherein the processing is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

36 ~~76~~. The method of Claim 29 ~~69~~, wherein the processing optimizes the at least one output signal.

37 ~~77~~. The method of Claim 36 76, wherein the optimization is defined as operation of the adaptive algorithm.

B

41 ~~78~~. The method of Claim 36 ~~76~~, wherein the processing converges to optimize the output signal based on an error signal.

42 ~~79~~. The method of Claim 41 ~~78~~, wherein the convergence comprises reducing the error signal to below a threshold.

43 ~~80~~. The method of Claim 41 ~~78~~, wherein the convergence comprises minimizing the error signal.

B7 cont

38 ~~81~~. The method of Claim 37 ~~77~~, wherein the adaptive algorithm comprises a least squares algorithm.

39 ~~82~~. The method of Claim 37 ~~77~~, wherein the adaptive algorithm comprises a least squares lattice.

40 ~~83~~. The method of Claim 37 ~~77~~, wherein the adaptive algorithm comprises a least mean squares algorithm.

44 ~~84~~. The method of Claim 27 ~~67~~, wherein the adaptive algorithm comprises a least squares algorithm.

45 ~~85~~. The method of Claim 27 ~~67~~, wherein the adaptive algorithm comprises a least mean squares algorithm.

46 ~~86~~. The method of Claim 27 ~~67~~, wherein the adaptive algorithm comprises a least squares lattice.

47 ~~87~~. The method of Claim 46 ~~86~~, wherein the adaptive algorithm is a component of an adaptive noise canceler.

48 ~~88~~. The method of claim 27 ~~67~~, further comprising filtering the at least one intensity signal with a predetermined filter, prior to the processing.

49 ~~89~~. The method of claim 27 ~~67~~, further comprising displaying the oxygen saturation.

B

50 ~~90~~. A pulse oximeter comprising:

light emitters that transmit light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate at least one intensity signal; and

a processor that executes an adaptive algorithm to have an effect on the at least one intensity signal, wherein the at least one intensity signal, once effected by the adaptive algorithm, is used in calculating oxygen saturation.

B2 cont.

51 ~~91~~. The pulse oximeter of claim ~~90~~ 50, further comprising an analog to digital converter that converts the at least one intensity signal to a digital representation of the at least one intensity signal.

52 ~~92~~. The pulse oximeter of claim ~~90~~ 50, wherein the at least one intensity signal comprises at least a desired portion and a noise portion.

53 ~~93~~. The pulse oximeter of Claim ~~92~~ 52, wherein the noise portion is caused at least in part by motion of a patient.

54 ~~94~~. The pulse oximeter of Claim ~~93~~ 53, wherein the noise portion is uncorrelated to the desired portion.

55 ~~95~~. The pulse oximeter of Claim ~~93~~ 53, wherein the noise is erratic.

56 ~~96~~. The pulse oximeter of claim ~~93~~ 53, wherein the effect comprises at least reducing the noise portion in the at least one intensity signal.

57 ~~97~~. The pulse oximeter of Claim ~~96~~ 56, wherein the effect is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

58 ~~98~~. The pulse oximeter of Claim ~~92~~ 52, wherein the effect comprises at least reducing the noise portion in the at least one intensity signal to provide an optimized output signal for use in calculating oxygen saturation.

59 ~~99~~. The pulse oximeter of Claim ~~98~~ 58, wherein the optimum corresponds to converging the adaptive algorithm based on an error signal.

60 ~~100~~. The pulse oximeter of Claim ~~99~~ 59, wherein the converging the adaptive algorithm comprises reducing the error signal to below a threshold.

61 ~~101~~. The pulse oximeter of Claim ~~99~~ 59, wherein the converging the adaptive algorithm comprises minimizing the error signal in a least squares manner.

B

62 ~~102~~. The pulse oximeter of Claim 58 ~~98~~, wherein the adaptive algorithm comprises a least squares algorithm.

63 ~~103~~. The pulse oximeter of Claim 58 ~~98~~, wherein the adaptive algorithm comprises a least mean squares algorithm.

64 ~~104~~. The pulse oximeter of Claim 58 ~~98~~, wherein the adaptive algorithm comprises a least squares lattice.

B2 cont.

65 ~~105~~. The pulse oximeter of Claim 64 ~~104~~, wherein the adaptive algorithm is a component of an adaptive noise canceler.

66 ~~106~~. The pulse oximeter of Claim 50 ~~90~~, wherein the adaptive algorithm comprises a least squares algorithm.

67 ~~107~~. The pulse oximeter of Claim 50 ~~90~~, wherein the adaptive algorithm comprises a least mean squares algorithm.

68 ~~108~~. The pulse oximeter of Claim 50 ~~90~~, wherein the adaptive algorithm comprises a least squares lattice.

69 ~~109~~. The pulse oximeter of Claim 68 ~~108~~, wherein the adaptive algorithm is a component of an adaptive noise canceler.

Sub C2

~~110. A pulse oximeter wherein intensity signals resulting from light of first and second wavelengths attenuated by body tissue carrying pulsing blood are effected by the operation of a least squares algorithm, which intensity signals, once effected, are used in the calculation of oxygen saturation.~~

~~111. The pulse oximeter of Claim 110, wherein the intensity signals are effected to reduce noise in the intensity signals.~~

~~112. The pulse oximeter of Claim 110, further comprising a microprocessor that operates the least squares algorithm, the microprocessor having digital representations of the intensity signals as inputs.~~

71 ~~113~~. The pulse oximeter of Claim 77 ~~112~~, wherein the microprocessor further operates on a principle that the oxygen saturation changes relatively slowly over short periods of time.

72 ~~114~~. The pulse oximeter of Claim 71 ~~111~~, wherein the least squares algorithm comprises a least squares lattice.

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73 ~~115~~. The pulse oximeter of Claim 71 ~~111~~, wherein the least squares algorithm comprises a least mean squares algorithm.

74 ~~116~~. The pulse oximeter of Claim 71 ~~111~~, wherein the noise is caused at least in part by motion of a patient.

75 ~~117~~. The pulse oximeter of Claim 74 ~~116~~, wherein the intensity signals have a desired portion, and wherein the noise is substantially uncorrelated to the desired portion.

76 ~~118~~. The pulse oximeter of Claim 74 ~~116~~, wherein the noise is erratic.

79 ~~119~~. The pulse oximeter of Claim 70 ~~110~~, wherein the effect of the operation of the least squares algorithm is to optimize at least one of the intensity signals.

80 ~~120~~. The pulse oximeter of Claim 79 ~~119~~, wherein the optimum is defined as convergence of the least squares algorithm based on an error signal.

2x Part

81 ~~121~~. The pulse oximeter of Claim 79 ~~119~~, wherein the least squares algorithm comprises a least squares lattice.

82 ~~122~~. The pulse oximeter of Claim 81 ~~121~~, wherein the least squares algorithm is a component of an adaptive noise canceler.

83 ~~123~~. The pulse oximeter of Claim 79 ~~119~~, wherein the least squares algorithm comprises a least mean squares algorithm.

84 ~~124~~. A method of determining blood oxygen saturation comprising:

transmitting light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate at least one intensity signal;

processing the at least one intensity signal using a least squares algorithm to provide at least one output signal; and

calculating oxygen saturation based upon the at least one output signal.

85 ~~125~~. The method of Claim 84 ~~124~~, wherein the at least one intensity signal has a desired portion and a noise portion, and wherein the processing reduces noise in the at least one intensity signal.

89 ~~86~~ ~~126~~. The method of Claim 84 ~~124~~, wherein the processing is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

B

~~127~~ 86. The method of Claim ~~126~~ 85, wherein the noise is uncorrelated to the desired portion.

~~128~~ 87. The method of Claim ~~125~~ 85, wherein the noise is erratic.

~~129~~ 88. The method of Claim ~~125~~ 85, wherein the noise is caused at least in part by motion of a patient.

~~130~~ 90. The method of Claim ~~124~~ 84, wherein the least squares algorithm comprises a least mean squares algorithm.

B2 cont.

~~131~~ 91. The method of Claim ~~124~~ 84, wherein the least squares algorithm comprises a least squares lattice.

~~132~~ 92. The method of Claim ~~124~~ 84, wherein the processing optimizes the at least one output signal, the optimum corresponding to the operation of the least squares algorithm.

~~133~~ 93. The method of Claim ~~132~~ 92, wherein the processing converges based on an error signal.

~~134~~ 94. The method of Claim ~~124~~ 84, wherein coefficients applied to the at least one intensity signal by the processing are adjusted as a result of the operation of the least squares algorithm.

~~135~~ 95. A method of determining blood oxygen saturation comprising:

transmitting light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate first and second intensity signals;

digitizing the first and second intensity signals to produce first and second digitized intensity signals;

processing the first and second digitized intensity signals to provide first and second output signals, wherein the processing adjusts itself to optimize at least one of the first and second output signals; and

calculating oxygen saturation based upon the first and second output signals.

B

~~136~~ 96. The method of Claim ~~135~~ 95, wherein the processing adjusts itself to optimize at least one of the first and second output signals based on at least one of the first and second output signals.

~~137~~ 97. The method of Claim ~~135~~ 95, wherein the optimum corresponds to operation of an error-reducing algorithm.

~~138~~ 98. The method of Claim ~~137~~ 97, wherein the error-reducing algorithm is a least squares algorithm.

~~139~~ 99. The method of Claim ~~138~~ 98, wherein the least squares algorithm converges based on an error.

b2 cont.

~~140~~ 100. The method of Claim ~~138~~ 98, wherein the least squares algorithm comprises a least mean squares algorithm.

~~141~~ 101. The method of Claim ~~138~~ 98, wherein the least squares algorithm comprises a least squares lattice.

~~142~~ 102. The method of Claim ~~141~~ 101, wherein the least squares algorithm is a component of an adaptive noise canceler.

~~143~~ 103. The method of Claim ~~135~~ 95, wherein the first and second digitized intensity signals have a desired portion and a noise portion.

~~144~~ 104. The method of Claim ~~143~~ 103, wherein the noise portion is uncorrelated to the desired portion.

~~145~~ 105. The method of Claim ~~143~~ 103, wherein the noise portion is erratic.

~~146~~ 106. The method of Claim ~~143~~ 103, wherein the noise portion is caused at least in part by motion of a patient.

~~147~~ 107. The method of Claim ~~143~~ 103, wherein the processing adjusts itself to reduce the noise portion based on at least the first or second output signal.

~~148~~ 108. The method of Claim ~~147~~ 107, wherein the processing adjusts itself to reduce the noise portion based on operation of a least squares algorithm.

~~149~~ 109. The method of Claim ~~148~~ 108, wherein the processing is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

~~150~~ 110. The method of Claim ~~148~~ 108, wherein the adjustment comprises adjusting coefficients applied to the first and second digitized intensity signals.

B

111 ~~151~~. The method of Claim 108 ~~148~~, wherein the least squares algorithm converges based on an error.

112 ~~152~~. The method of Claim 108 ~~148~~, wherein the least squares algorithm comprises a least mean squares algorithm.

113 ~~153~~. The method of Claim 108 ~~148~~, wherein the least squares algorithm comprises a least squares lattice.

114 ~~154~~. The method of Claim 113 ~~153~~, wherein the least squares algorithm is a component of an adaptive noise canceler.

B27 cont.

115 ~~155~~. A method of determining blood oxygen saturation comprising:

transmitting light of at least first and second wavelengths through body tissue carrying pulsing blood to a light-sensitive detector to generate first and second intensity signals;

digitizing the first and second intensity signals to produce first and second digitized intensity signals;

processing the first and second digitized intensity signals to provide first and second processed intensity signals, wherein the processing employs a predetermined algorithm that adjusts coefficients applied to the first and second digitized intensity signals, based on an output of the processing, in order to optimize at least one of the first and second processed intensity signals; and

determining blood oxygen saturation from the first and second processed intensity signals.

116 ~~156~~. The method of Claim 115 ~~155~~, wherein the predetermined algorithm comprises a least squares algorithm.

117 ~~157~~. The method of Claim 115 ~~155~~, wherein the predetermined algorithm comprises a least squares lattice.

118 ~~158~~. The method of Claim 117 ~~157~~, wherein the predetermined algorithm is a component of an adaptive noise canceler.

119 ~~159~~. The method of Claim 115 ~~155~~, wherein the predetermined algorithm comprises a least mean squares algorithm.

B

120 ~~160~~. The method of Claim ~~155~~ 115, wherein the first and second digitized intensity signals have a desired portion and a noise portion.

121 ~~161~~. The method of Claim ~~160~~ 120, wherein the noise portion is uncorrelated to the desired portion.

122 ~~162~~. The method of Claim ~~160~~ 120, wherein the noise portion is erratic.

123 ~~163~~. The method of Claim ~~160~~ 120, wherein the noise portion is caused at least in part by motion of a patient.

124 ~~164~~. The method of Claim ~~163~~ 123, wherein the predetermined algorithm adjusts the coefficients to reduce the noise portion.

B2 cont.

125 ~~165~~. The method of Claim ~~160~~ 120, wherein the predetermined algorithm adjusts the coefficients to reduce the noise portion.

126 ~~166~~. The method of Claim ~~165~~ 125, wherein the processing is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

127 ~~167~~. The method of Claim ~~165~~ 125, wherein the predetermined algorithm comprises a least squares algorithm.

128 ~~168~~. The method of Claim ~~165~~ 125, wherein the predetermined algorithm comprises a least squares lattice.

129 ~~169~~. The method of Claim ~~168~~ 128, wherein the predetermined algorithm is a component of an adaptive noise canceler.

130 ~~170~~. The method of Claim ~~165~~ 125, wherein the predetermined algorithm comprises a least mean squares algorithm.

Sub C3

~~171~~ 131. A pulse oximeter wherein intensity signals resulting from light of first and second wavelengths attenuated by pulsing blood are effected by operation of an algorithm that responds to at least one error signal, wherein the intensity signals, after being effected, are used in the calculation of oxygen saturation.

~~172~~. The pulse oximeter of Claim 171, wherein the effect is reducing noise in the intensity signals.

133 ~~173~~. The pulse oximeter Claim ~~172~~ 132, wherein the effect is further based on a principle that the oxygen saturation changes relatively slowly over short periods of time.

134 ~~174~~. The pulse oximeter of Claim ~~172~~ 132, wherein the algorithm adjusts the effect on the intensity signals to minimize the at least one error signal.

135 ~~175~~. The pulse oximeter of Claim ~~172~~ 132, wherein the noise comprises motion artifact noise.

136 ~~176~~. The pulse oximeter of Claim ~~171~~ 131, wherein the algorithm adjusts the effect on the intensity signals to optimize at least one output signal resulting from the operation of the algorithm.

137 ~~177~~. The pulse oximeter of Claim ~~176~~ 136, wherein the algorithm adjusts the effect on the intensity signals to minimize the at least one error signal.

B7 cont

138 ~~178~~. The pulse oximeter of Claim ~~176~~ 136, wherein the algorithm comprises a least squares algorithm.

139 ~~179~~. The pulse oximeter of Claim ~~176~~ 136, wherein the algorithm adjusts the effect on the intensity signals by adjusting coefficients applied to the intensity signals.

140 ~~180~~. The pulse oximeter of Claim ~~171~~ 131, wherein the algorithm comprises a least squares algorithm.

141 ~~181~~. The pulse oximeter of Claim ~~171~~ 131, wherein the algorithm comprises a least mean squares algorithm.

142 ~~182~~. The pulse oximeter of Claim ~~171~~ 131, wherein the algorithm comprises a least squares lattice.

143 ~~183~~. The pulse oximeter of Claim ~~171~~ 131, wherein the error signal comprises a comparison between a signal and an estimate of the signal.

144 ~~184~~. The pulse oximeter of Claim ~~183~~ 143, wherein the estimate of the signal comprises a prediction of the signal.

Sub C4

185. A pulse oximeter wherein a signal and an estimate of the signal are compared in order to produce an effect on intensity signals resulting from light of first and second wavelengths attenuated by pulsing blood, which intensity signals are then used in the calculation of oxygen saturation.

186. The pulse oximeter of Claim 185, wherein the effect is reducing noise in the intensity signals.

147 ~~187~~. The pulse oximeter of Claim 146 ~~186~~, wherein the noise comprises motion artifact noise.

148 ~~188~~. The pulse oximeter of Claim 146 ~~186~~, wherein the noise is erratic.

149 ~~189~~. The pulse oximeter of Claim 146 ~~186~~, wherein the effect on the intensity signals is adjusted to optimize the reducing of noise in the intensity signals.

150 ~~190~~. The pulse oximeter of Claim 149 ~~189~~, wherein the optimization is defined as convergence of a least squares algorithm.

151 ~~191~~. The pulse oximeter of Claim 150 ~~190~~, wherein the least squares algorithm comprises a least mean squares algorithm.

B2 cont.

152 ~~192~~. The pulse oximeter of Claim 150 ~~190~~, wherein the least squares algorithm comprises a least squares lattice.

153 ~~193~~. The pulse oximeter of Claim 145 ~~185~~, wherein the estimate of the signal comprises a prediction of the signal.

Sub C5

C5

~~194. In a pulse oximeter, a processor that adjusts its own transfer function using a least squares algorithm to effect intensity signals resulting from light of first and second wavelengths attenuated by pulsing blood in a patient.~~

~~195. The processor of Claim 194, wherein the effect of the least squares algorithm upon convergence is to optimize the intensity signals for use in calculating oxygen saturation.~~

~~196. The processor of Claim 194, wherein the intensity signals have at least a desired portion and a noise portion.~~

~~197. The processor of Claim 196, wherein the effect is to reduce the noise portion.~~

~~198. The processor of Claim 197, wherein the noise portion is uncorrelated to the desired portion.~~

199. The processor of ~~Claim~~ 198, wherein the effect is to reduce the noise portion.

Sub C6

C6

200. The processor of ~~Claim~~ 196, wherein the noise portion is at least partially caused by motion of a patient.